

## Claims

1. A method for detecting an analyte containing or labelled with a haem moiety within a sample, said method comprising:
  - 5 a) contacting said sample with a magnetic bead having immobilised thereon a specific binding partner for said analyte and allowing analyte to bind to said specific binding partner;
  - b) separating the magnetic beads from the sample, and if necessary, labelling the immobilised analyte with a haem containing label;
  - 10 c) resuspending the beads and subjecting them to alkaline conditions sufficient to release haem moieties therefrom but not to extract inorganic iron from the beads;
  - d) detecting released haem moieties using a luminol chemiluminescent assay procedure.
2. A method according to claim 1 wherein in step (c) is conducted within a pH range of from 12.5-13.5.
- 20 3. A method according to claim 1 or claim 2 wherein step (d) is carried out directly on the bead suspension.
4. A method according to claim 1 or claim 2 wherein after step (c), the magnetic beads are separated, and step (d) is carried out on supernatant remaining.
- 25 5. A method according to any one of the preceding claims wherein between step (b) and step (c), the magnetic beads are resuspended in a washing solution, and thereafter, separated from the washing solution.
- 30 6. A method according to any one of the preceding claims wherein the analyte is a spore.
- 35 7. A method according to claim 6 wherein the analyte is a *Bacillus* spore.

8. A method according to any one of claims 1 to 5 wherein the analyte is labelled with a haem containing moiety.

9. A method according to claim 8 wherein said haem containing moiety is a horseradish peroxidase labelled antibody specific for an analyte.

10. A method according to any one of the preceding claims wherein in step (d) luminol is added to the released haem moieties and incubated therewith, and thereafter, oxidant added to generate the signal.

11. A method according to claim 10, wherein amount of oxidant present is sufficient to oxidise all of the luminol.

15 12. A method according to claim 10 or 11 wherein the oxidant is sodium perborate or hydrogen peroxide.

20 13. A method according to any one of the preceding claims wherein the specific binding partner for the analyte is an antibody or binding fragment thereof.

25 14. A kit for use in a method according to claim 1, said kit comprising magnetic beads, luminol or functional chemiluminescent derivatives thereof and a working solution having a pH within the range of from 12.5-13.5.

15. A kit according to claim 14 wherein said magnetic beads are coated with a specific binding partner for an analyte.

30 16. A kit according to claim 15 wherein said specific binding partner is an antibody.

35 17. A kit according to any one of claims 14 to 16, which further comprises an oxidant for luminol.

18. A kit according to claim 17 wherein the oxidant is sodium perborate or hydrogen peroxide.

19. A method according to claim 1 substantially as hereinbefore  
5 described with reference to the Example.